Analytical Methods for Environmental Sampling at Underground Storage Tank Sites in Utah (July 2004)

Substance or Product Type	Contaminant Compounds to be Analyzed for Each Substance or Product Type	ANALYTICAL METHODS[1] Soil, Groundwater or Surface Water
Gasoline	Total Petroleum Hydrocarbons (purgeable TPH as gasoline range organics C_6 - C_{10})	EPA 8015B or EPA 8260B
	Benzene, Toluene, Ethyl benzene, Xylenes, Naphthalene, (BTEXN) and MTBE	EPA 8021B or EPA 8260B
Diesel	Total Petroleum Hydrocarbons (extractable TPH as diesel range organics $C_{10} – C_{28}$)	EPA 8015B
	Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN)	EPA 8021B or EPA 8260B
Used Oil	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664A or EPA 1664A (SGT*)
	Benzene, Toluene, Ethyl benzene, Xylenes, Naphthalene (BTEXN) & MTBE; and Halogenated Volatile Organic Compounds (VOX)	EPA 8021B or EPA 8260B
New Oil	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664A or EPA 1664A (SGT*)
Other	Type of analyses will be based upon the substance or product stored, and as approved by the Executive Secretary (UST)	Method will be based upon the substance or product type
Unknown	Total Petroleum Hydrocarbons (purgeable TPH as gasoline range organics C_6 - C_{10})	EPA 8015B or EPA 8260B
	Total Petroleum Hydrocarbons (extractable TPH as diesel range organics $C_{10} – C_{28}$)	EPA 8015B
	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664A or EPA 1664A (SGT*)
	Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN) and MTBE; and Halogenated Volatile Organic Compounds (VOX)	EPA 8021B or EPA 8260B

[1] The following modifications to these certified methods are considered acceptable by the Executive Secretary (UST):

- Dual column confirmation may not be required for TPH and BTEXN/MTBE analysis.
- A micro-extraction or scale-down technique may be used for aqueous samples, but only for the determination of extractable TPH as diesel range organics ($C_{10} – C_{28}$).
- Hexane may be used as an extraction solvent.
- *Silica Gel Treatment (SGT) may be used in the determination of Total Recoverable Petroleum Hydrocarbons.

NOTE: The sample preparation method and any modification(s) to a certified method must be reported by the laboratory.